

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

- 1 1. (Previously Presented) An integrated circuit, comprising:
 - 2 a lead frame having a plurality of leads, each one of the leads having a respective length;
 - 3 a current conductor portion comprising a coupling of at least two of the plurality of leads;
 - 4 a substrate having first and second opposing surfaces, the first surface proximate to said
 - 5 current conductor portion and the second surface distal from said current conductor portion; and
 - 6 one or more magnetic field transducers disposed on the first surface of said substrate,
 - 7 wherein each one of the leads has a bend in a direction selected to result in each one of the leads
 - 8 being closer to the first surface of the substrate than to the second surface of the substrate
 - 9 throughout the length of the lead.
- 1 2. (Cancelled)
- 1 3. (Cancelled)
- 1 4. (Original) The integrated circuit of Claim 1, wherein said current conductor portion further
 - 2 comprises a conductive clip coupled to the at least two of the plurality of leads.
- 1 5. (Original) The integrated circuit of Claim 4, wherein said substrate is disposed having the
 - 2 first surface of said substrate above said conductive clip and the second surface of said substrate
 - 3 above the first surface.

6. (Original) The integrated circuit of Claim 4, wherein said substrate is disposed having the first surface of said substrate below said conductive clip and the second surface below the first surface.

7. (Original) The integrated circuit of Claim 4, wherein a thickness of the conductive clip is selected in accordance with a current passing through the conductive clip.

8. (Original) The integrated circuit of Claim 1, wherein said substrate has at least one bonding pad coupled to a corresponding one of the plurality of leads with a bond wire.

9. (Previously Presented) The integrated circuit of Claim 1, wherein said substrate is coupled to said lead frame with a selected one of a solder ball, a gold bump, a eutectic and high lead solder bump, a no-lead solder bump, a gold stud bump, a polymeric conductive bump, or an anisotropic conductive paste coupled to a corresponding one of the plurality of leads.

10. (Original) The integrated circuit of Claim 1, wherein the current conductor portion has a current conductor portion axis and at least two of said one or more magnetic field transducers are disposed on opposite sides of the current conductor portion axis.

11. (Original) The integrated circuit of Claim 1, wherein at least two of said one or more magnetic field transducers are rotated relative to each other for providing predetermined voltage output polarities.

12. (Original) The integrated circuit of Claim 1, wherein at least a portion of said current conductor portion has a T-shaped cross section.

13. (Original) The integrated circuit of Claim 1, wherein at least a portion of said current conductor portion has a rectangular cross section having a minimum dimension less than a thickness of said lead frame.

1 14. (Original) The integrated circuit of Claim 1, further comprising at least one amplifier
2 disposed on said substrate.

1 15. (Original) The integrated circuit of Claim 14, wherein the at least one amplifier provides an
2 output signal proportional to a sum of signals generated by at least two of said one or more
3 magnetic field transducers.

1 16. (Original) The integrated circuit of Claim 14, wherein the at least one amplifier forms a
2 summing arrangement coupled to four of said one or more magnetic field transducers.

1 17. (Original) The integrated circuit of Claim 1, further comprising a flux concentrator disposed
2 proximate said one or more magnetic field transducers.

1 18. (Original) The integrated circuit of Claim 1, further comprising a flux concentrating layer
2 disposed proximate the second surface of said substrate.

1 19-24. (Canceled)

1 25-28. (Canceled)

1 29. (Currently Amended) An integrated circuit, comprising:
2 a single lead frame having a plurality of leads;
3 a current conductor portion comprising a coupling of at least two of the plurality of leads,
4 wherein the current conductor portion comprises a loop having an inner dimension;
5 a substrate having first and second opposing surfaces, the first surface proximate to said
6 current conductor portion and the second surface distal from said current conductor portion; and

one or more magnetic field transducers disposed on the first surface of said substrate and proximate to the loop such that the one or more magnetic field transducers are responsive to a current flowing through the loop.

30. (Previously Presented) The integrated circuit of Claim 29, wherein at least one of the one or more magnetic field transducers is disposed within the inner dimension.

31. (Previously Presented) The integrated circuit of Claim 29, wherein at least a portion of said current conductor portion has a generally T-shaped cross section.

32. (Previously Presented) The integrated circuit of Claim 29, wherein at least a portion of said current conductor portion has a generally rectangular cross section having a smallest dimension less than a thickness of said lead frame.

33. (Previously Presented) The integrated circuit of Claim 29, wherein each one of the leads has a bend in a direction selected to result in each one of the leads being closer to the first surface of the substrate than to the second surface of the substrate throughout a length of the lead.

34-35. (Canceled)

36. (Previously Presented) The integrated circuit of Claim 1, further including a solder ball disposed to electrically couple said substrate to said lead frame.

37. (Previously Presented) The integrated circuit of Claim 1, further including a stud bump disposed to electrically couple said substrate to said lead frame.

38. (Previously Presented) The integrated circuit of Claim 1, wherein said current conductor portion has an edge bounding a surface of said current conductor portion, and wherein said one or more magnetic field transducers are disposed on the first surface of said substrate proximate to

4 said current conductor portion and in a position such that neither the edge of said current
5 conductor portion nor the surface of said current conductor portion overlaps said one or more
6 magnetic field transducers.

1 39. (New) The integrated circuit of Claim 1, comprising a single lead frame.